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EXAMINER	
NGUYEN, TRONG H	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/553,077	IWATSU ET AL.	
	Examiner	Art Unit	
	TRONG NGUYEN	4148	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☒ Claim(s) *1,3,7,9,10,14 and 15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 October 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12 October 2005, 05 March 2008, 03 June 2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The instant application numbered 10553077 filed on 10/12/2005 is presented for examination by the examiner.

Oath/Declaration

2. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in **37 C.F.R. 1.63**.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, certified English translations of the foreign applications (JP 2003-119946 and JP 2003-119947) must be submitted in reply to this action. 37 CFR 41.154(b) and 41.202(e).

Failure to provide a certified translation may result in no benefit being accorded for the non-English application.

Drawings

3. The applicant's submitted drawings are acceptable for examination purposes.

Information Disclosure Statement

4. The information disclosure statements (IDS) submitted on 10/12/2005, 03/05/2008, and 06/03/2008 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: **Information Processing Device and Method for continuous Reproduction of Digital Audio Data**.

Claim Objections

Claims **1**, **10**, and **14** are objected to because of the following informalities: A colon is missing after “comprising” (Claim **1**, line 1, claim **10**, line 1, and claim **14**, line 3).

Claim **3** is objected to because of the following informalities: Claim **3**, line 4 recites "plural transient storage areas" which appears to be referred to "plurality of transient storage areas" and hence is inconsistent. In addition, claim **3**, line 5 and line 7 recite “transient storage area” which seemed to be referred to “plurality of transient storage areas” and thus is also inconsistent.

Claims **7** and **15** are objected to because of the following informalities: Claim **7**, line 4 and line 6 and claim **15**, line 5 recite “transient storage area” which appeared to be referred to “plurality of transient storage areas” and hence is inconsistent.

Claim **9** is objected to because of the following informalities: Claim **9**, line 5 recites “plural sets” which seemed to be referred to “plurality of sets" and thus is inconsistent.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims **6** and **17** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim **6** recites the limitation "said unit area" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim **17** recites the limitations "said storage means" in line 1 and "said data capacity changing means" in line 4. There are insufficient antecedent bases for these limitations in the claim.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims **1-2** and **10-11** are rejected under 35 U.S.C. 102(b) as being anticipated by Hamasaki et al. US 2002/0065665 (hereinafter "Hamasaki").

Regarding claim **1**, Hamasaki discloses "An information processing apparatus comprising" as [a digital data decompressing system (Col. 1, Par. 0015, line 1)] "processing means for carrying out at least a processing of decoding encoded unit data and a pre-decoding processing related to said unit data, said pre-decoding processing being carried out prior to said processing of decoding;" as ["If it is judged that writing can be started, control proceeds to the next step S23, where a header part is decoded by the bit stream processor 602 to obtain the number of data items within the frame. (Fig. 11, Col. 6, Par. 0077, line 8-11) and "Next, sample data is extracted from a bit stream to perform Huffman decoding (step S24)." (Fig. 11, Col. 6, Par. 0078, line 1-2)] "storage means where decoded data obtained on said processing of decoding are written and transiently stored;" as ["The decoded sample data of each frequency band is stored in a bank of bank number i (=0) set by step S21" (Fig. 11, Col. 6, Par. 0078, line 2-4)] "and outputting means from which the decoded data stored in said storage means is continuously read out and output as data for reproduction/outputting;" as ["Decoded audio data stored in buffer 605 is supplied to a DA converter 200, where it is converted

to an analog signal before being reproduced by a sound output unit 300 such as headphones, earphones, or loudspeaker." (Fig. 1, Col. 3, Par. 0044, line 14-17) This method of outputting is done in a continuous manner since the signal going to the headphone etc. is continuous.] "said processing means commencing the processing of decoding of said unit data after the end of the pre-decoding processing related to said unit data." as [With respect to this limitation, Hamasaki discloses Huffman decoding (step 24) starts after decode header part is finished (step 23)].

Regarding claim **2**, Hamasaki discloses "The information processing apparatus according to claim 1 wherein, if second unit data is reproduced/output next to first unit data, said processing means commences pre-decoding processing related to said second unit data after the end of the processing of decoding of said first unit data." as ["It is judged in step S34 whether decoding for all frames terminates, and when it does not terminate, control returns to step S21 to repeat the above processing." (Fig. 11, Col. 6, Par. 0081, line 8-10). This shows that when the next frame is reproduced, its header decoding starts after Huffman decoding of previous frame is finished.].

Regarding claim **10**, Hamasaki discloses "An information processing method comprising" as [a digital data decompressing system and method (title)] "a pre-decoding processing relevant to encoded unit data;" as ["If it is judged that writing can be started, control proceeds to the next step S23, where a header part is decoded by the bit stream processor 602 to obtain the number of data items within the frame. (Fig. 11, Col. 6, Par. 0077, line 8-11)] "processing of decoding for decoding said unit data after the end of said pre-decoding processing;" as ["Next, sample data is extracted from a bit stream to

perform Huffman decoding (step S24)." (Fig. 11, Col. 6, Par. 0078, line 1-2)] "processing of storage for transiently storing decoded data obtained on said processing of decoding;" as ["The decoded sample data of each frequency band is stored in a bank of bank number i (=0) set by step S21" (Fig. 11, Col. 6, Par. 0078, line 2-4)] "and outputting processing for successively reading out said decoded data transiently stored by said processing of storage and for outputting the read-out decoded data as data for reproduction/outputting." as ["The synthesized data is successively stored in the buffer 605 as PCM sound source data." (Col. 4, Par. 0051, line 6-8) and "Decoded audio data stored in buffer 605 is supplied to a DA converter 200, where it is converted to an analog signal before being reproduced by a sound output unit 300 such as headphones, earphones, or loudspeaker." (Fig. 1, Col. 3, Par. 0044, line 14-17)]

Regarding claim **11**, Hamasaki discloses "The information processing method according to claim 10 wherein, when second unit data is reproduced/output next to first unit data, pre-decoding processing relevant to second unit data is commenced after the end of the processing of decoding of first unit data" as ["It is judged in step S34 whether decoding for all frames terminates, and when it does not terminate, control returns to step S21 to repeat the above processing." (Fig. 11, Col. 6, Par. 0081, line 8-10). This shows that when the next frame is reproduced, its header decoding starts after Huffman decoding of previous frame is finished.].

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims **3, 6,** and **14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamasaki in view of Liu et al. US 7,266,132 (hereinafter "Liu").

Regarding claim **3**, Hamasaki discloses "The information processing apparatus according to claim 1 wherein said storage means includes a plurality of transient storage areas;" as ["a bank memory 603 comprising RAM in which decoded data and data subjected to computation processing are stored;" (Fig. 1, Col. 3, Par. 0044, line 5-7) and "the bank memory 603 comprises, e.g., 36 banks BNK0, BNK1, ..., and BNK35." (Col. 4, Par. 0054, line 1-2)] "said outputting means reading out the written decoded data each time said decoded data is written in said transient storage area and outputting the data as data for reproduction/outputting." as ["The synthesized data is successively stored in the buffer 605 as PCM sound source data." (Col. 4, Par. 0051, line 6-8) and "Decoded audio data stored in buffer 605 is supplied to a DA converter 200, where it is converted to an analog signal before being reproduced by a sound output unit 300 such as headphones, earphones, or loudspeaker." (Fig. 1, Col. 3, Par. 0044, line 14-17)] "said processing means sequentially writing decoded data, obtained on processing of decoding, in said plural transient storage areas," as [Fig. 11 and see

rejection to claim **1** above] but does not specifically disclose “from one data capacity of said transient storage area to another;".

However, Liu discloses "intelligent and flexible techniques for memory design and allocation of video data during transmission" [(Col. 1, line 9-11) “means for arranging a memory space to include multiple block pools, each block pool including a set of blocks having a memory size common to the block pool. The multiple block pools each having a different common memory size." (Fig. 3A, Col. 2, line 63-67) and "means for storing data from the multiple bit streams in a block in one of the multiple block pools when the data has a storage requirement equal to or less than the common memory size for the block pool." (Col. 3, line 2-5)].

Hamasaki and Liu are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to enhance the digital data decompressing system of Hamasaki to arrange memory space into multiple block pools of different common memory size and to store data in one of the multiple block pools as disclosed by Liu in order to make the system more efficient and hence avoid excessive memory allotment or extra cost (see Liu Col. 1, line 44-45).

Regarding claim **6**, for examining purposes, “unit area” will be considered as “unit data”.

Hamasaki discloses “The information processing apparatus according to claim 1 wherein said storage means includes at least one transient storage area” and “data

capacity changing means for changing the data capacity of said transient storage area" [see rejection to claim **3** above] but does not specifically disclose "depending on the length of reproduction for said unit area."

However, Liu discloses a method of selecting appropriate storage area for incoming data where "the amount of memory space designated for incoming data will typically depend on at least (i) a bit rate of the incoming data and (ii) a time delay for processing the data before transmission" (Col. 5, line 62-65). The higher the bit rate the more data per second is coming in and thus a bigger storage area will be chosen in order to prevent loss of any incoming data and the same goes length of reproducing time. The longer the reproducing time, the more data will be reproduced and a larger storage area is required in order to avoid loss of incoming data. By teaching a technique that changes the capacity of a buffer depending on bit rate and time delay of processing, Liu also teaches changing the capacity of buffer based on length of reproducing time. Reproducing time is considered the delay in processing the data. Therefore, the combination of Hamasaki and Liu makes it obvious to change the capacity of a buffer based on reproduction time.

Hamasaki and Liu are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention, to modify the digital data decompressing system of Hamasaki to use the method of selecting storage area taught by Liu because it would provide to

accommodate incoming data and prevent loss of data which could result in discontinuity at time of outputting.

Regarding claim **14**, Hamasaki discloses "The information processing method according to claim 10 wherein said processing of storage is performed on storage means having at least one transient storage area;" and "said method further comprising processing of changing the data capacity of said transient storage area [see rejection to claim **3** above] but does not specifically disclose "depending on the duration of reproduction time for said unit data."

However, Liu discloses a step of selecting appropriate storage area for incoming data where "the amount of memory space designated for incoming data will typically depend on at least (i) a bit rate of the incoming data and (ii) a time delay for processing the data before transmission" (Col. 5, line 62-65). The higher the bit rate the more data per second is coming in and thus a bigger storage area will be chosen in order to prevent loss of any incoming data and the same goes length of reproducing time. The longer the reproducing time, the more data will be reproduced and a larger storage area is required in order to avoid loss of incoming data. By teaching a technique that changes the capacity of a buffer depending on bit rate and time delay of processing, Liu also teaches changing the capacity of buffer based on the duration of reproduction time. Reproducing time is considered the delay in processing the data. Therefore, the combination of Hamasaki and Liu makes it obvious to change the capacity of a buffer based on reproduction time.

Hamasaki and Liu are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the digital data decompressing system of Hamasaki to use the method of selecting storage area taught by Liu in order to accommodate incoming data and prevent loss of data which could result in discontinuity at time of outputting.

12. Claims **4** and **12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamasaki in view of Jiyunsaku JP 2001243705 (hereinafter "Jiyunsaku") and further in view of Shinichi JP 11-312364 (hereinafter "Shinichi").

Regarding claim **4**, Hamasaki discloses "The information processing apparatus according to claim 1 wherein said processing of decoding for unit data is the processing of demodulation;" [see rejection to claim **1** above] but does not specifically disclose "said processing of decoding for unit data is the processing of decryption;" and "said pre-decoding processing related to unit data is tamper check processing for said unit data".

However, Jiyunsaku discloses recording and reproducing sound data in which data compression of the voice data DA is carried out by MP3 specification, it is changed into MP3 file Fmp3, and these MP3 file Fmp3 are supplied to the enciphering circuit 114 to be encrypted before recording on a CD-R disk (Par. 0026 and 0027). By teaching a method of encrypting compressed audio data, Jiyunsaku also teaches method of decrypting encrypted compressed audio data during the decoding process since the encrypted compressed audio data must be decrypted at time of reproduction.

Hamasaki and Jiyunsaku are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to enhance the teaching of Hamasaki by including encryption and/or decryption during decoding and pre-decoding processes as disclosed by Jiyunsaku in order to raise the security of recorded voice data (as taught by Jiyunsaku).Furthermore, Shinichi discloses a digital data record/playback equipment which “can detect easily whether it is that by which the digital data currently recorded on the medium was changed" (Par. 0010, line 1-3). As shown in Drawing 3, tamper check processing is carried out prior to decompression of data. By teaching method for tamper check processing prior to decompression of data, Shinichi also teaches pre-decoding processing related to unit data which is the tamper check processing for that unit data.

Hamasaki and Shinichi are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to enhance the digital data decompressing system of Hamasaki by including a tamper check processing during pre-decoding process as taught by Shinichi in order to detect accidental or intentional error or alterations prior to decompressing the data.

Regarding claim **12**, Hamasaki discloses “The information processing method according to claim 10 wherein said processing of decoding for is the processing of demodulation;” [see rejection to claim **10** above] but does not specifically disclose “said

processing of decoding is the processing of decryption;" and "wherein said pre-decoding processing is tamper check processing for said unit data".

However, Jiyunsaku discloses recording and reproducing sound data in which data compression of the voice data DA is carried out by MP3 specification, it is changed into MP3 file Fmp3, and these MP3 file Fmp3 are supplied to the enciphering circuit 114 to be encrypted before recording on a CD-R disk (Par. 0026 and 0027). By teaching a method of encrypting compressed audio data, Jiyunsaku also teaches method of decrypting encrypted compressed audio data during the decoding process since the encrypted compressed audio data must be decrypted at time of reproduction.

Hamasaki and Jiyunsaku are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to enhance the teaching of Hamasaki by including encryption and/or decryption during decoding and pre-decoding processes as disclosed by Jiyunsaku in order to raise the security of recorded voice data (as taught by Jiyunsaku).

Furthermore, Shinichi discloses a digital data record/playback equipment which "can detect easily whether it is that by which the digital data currently recorded on the medium was changed" (Par. 0010, line 1-3). As shown in Drawing 3, tamper check processing is carried out prior to decompression of data. By teaching method for tamper check processing prior to decompression of data, Shinichi also teaches pre-decoding processing related to unit data which is the tamper check processing for that unit data.

Hamasaki and Shinichi are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to enhance the digital data decompressing system of Hamasaki in view of Jiyunsaku by including a tamper check processing during pre-decoding process as taught by Shinichi in order to detect accidental or intentional error or alterations prior to decompressing the data.

13. Claims **5** and **13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamasaki in view of Jiyunsaku.

Regarding claim **5**, Hamasaki discloses "The information processing apparatus according to claim 1 wherein said processing of decoding for unit data is the processing of demodulation;" [see rejection to claim **1** above] and "and wherein said pre-decoding processing related to unit data is processing of demodulation for relevant data pertinent to said unit data." [see rejection to claim **1** above] but does not specifically disclose "said processing of decoding for unit data is the processing of decryption;" and "and wherein said pre-decoding processing related to unit data is processing of decryption for relevant data pertinent to said unit data."

However, Jiyunsaku discloses recording and reproducing sound data in which data compression of the voice data DA is carried out by MP3 specification, it is changed into MP3 file Fmp3, and these MP3 file Fmp3 are supplied to the enciphering circuit 114 to be encrypted before recording on a CD-R disk (Par. 0026 and 0027). By teaching a method of encrypting compressed audio data, Jiyunsaku also teaches method of

decrypting encrypted compressed audio data during decoding and pre-decoding processes since the encrypted compressed audio data must be decrypted at time of reproduction.

Hamasaki and Jiyunsaku are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to enhance the teaching of Hamasaki by including decryption and/or demodulation during decoding and pre-decoding processes as disclosed by Jiyunsaku in order to raise the security of recorded voice data (as taught by Jiyunsaku).

Regarding claim **13**, Hamasaki discloses "The information processing method according to claim 10 wherein said processing of decoding is the processing of demodulation;" [see rejection to claim **10** above] and "said pre-decoding processing is the processing of demodulation for relevant data related to said unit data." [see rejection to claim **10** above] but does not specifically disclose "said processing of decoding is the processing of decryption;" and "said pre-decoding processing is the processing of decryption for relevant data related to said unit data."

However, Jiyunsaku discloses recording and reproducing sound data in which data compression of the voice data DA is carried out by MP3 specification, it is changed into MP3 file Fmp3, and these MP3 file Fmp3 are supplied to the enciphering circuit 114 to be encrypted before recording on a CD-R disk (Par. 0026 and 0027). By teaching a method of encrypting compressed audio data, Jiyunsaku also teaches method of

decrypting encrypted compressed audio data during the decoding process since the encrypted compressed audio data must be decrypted at time of reproduction.

Hamasaki and Jiyunsaku are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to enhance the teaching of Hamasaki by including decryption and/or demodulation during decoding and pre-decoding processes as disclosed by Jiyunsaku in order to raise the security of recorded voice data (as taught by Jiyunsaku).

14. Claims **7, 9, 15 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamasaki in view of Liu and further in view of Simon et al US 4,918,523 (hereinafter "Simon").

Regarding claim **7**, Hamasaki discloses "The information processing apparatus according to claim 1 wherein said storage means includes a plurality of transient storage areas;" [see rejection to claim **1** above] but does not specifically disclose "data capacity changing means for changing the data capacity of said transient storage area of said storage means" and "depending on the duration of processing time needed for said pre-decoding processing relevant to said unit data.".

However, Liu discloses "intelligent and flexible techniques for memory design and allocation of video data during transmission" [(Col. 1, line 9-11) "means for arranging a memory space to include multiple block pools, each block pool including a set of blocks having a memory size common to the block pool. The multiple block pools each having a different common memory size." (Fig. 3A, Col. 2, line 63-67) and "means

for storing data from the multiple bit streams in a block in one of the multiple block pools when the data has a storage requirement equal to or less than the common memory size for the block pool." (Col. 3, line 2-5)].

Hamasaki and Liu are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to enhance the digital data decompressing system of Hamasaki to arrange memory space into multiple block pools of different common memory size and to store data in one of the multiple block pools as disclosed by Liu in order to make the system more efficient and hence avoid excessive memory allotment or extra cost (see Liu Col. 1, line 44-45).

Furthermore, Simon discloses a method that "measures the time it takes to decompress each sub-frame of the compressed digital video signal S10" by “applying the signal S10 to a decoder such as processor 30 of the playback system 8 and measuring the processor decode time” (Col 10, line 20-24).

Simon and Hamasaki are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to enhance the digital data decompressing system of Hamasaki in view of Liu by measuring the length of decoding time for the frame header and if desired to change transient storage area depending on the duration of decoding time for the frame

header or pre-decoding processing as taught by Simon in order to monitor the amount of buffer storage needed by the playback system as mentioned by Simon (Col. 10, line 44-45).

Regarding claim **9**, Hamasaki and Liu disclose "wherein said storage means includes a plurality of sets of transient storage areas, each set being made up of a plurality of transient storage areas and being different in storage capacities; said data capacity changing means selecting one of transient storage areas of said plural sets" [see rejection to claim **7** above] and Simon discloses "depending on the duration of the processing time retained to be needed for said pre-decoding processing." [With respect to this limitation, Simon discloses a method that "measures the time it takes to decompress each sub-frame of the compressed digital video signal S10" by "applying the signal S10 to a decoder such as processor 30 of the playback system 8 and measuring the processor decode time" (Col 10, line 20-24). Simon's method allows measurement of the length of decoding time for the frame header or pre-decoding processing and if desired to use Liu's method to change transient storage area from plural sets depending on the duration of decoding time for the frame header.].

Regarding claim **15**, Hamasaki discloses "The information processing method according to claim 10 wherein said processing of storage is carried out for storage means having a plurality of transient storage areas " [see rejection to claim **10** above] but does not specifically disclose "and wherein the method further comprises data capacity change processing for changing the data capacity of said transient storage

area" and "depending on the duration of processing time retained to be needed for pre-decoding processing relevant to said unit data."

However, Liu discloses "intelligent and flexible techniques for memory design and allocation of video data during transmission" [(Col. 1, line 9-11) "means for arranging a memory space to include multiple block pools, each block pool including a set of blocks having a memory size common to the block pool. The multiple block pools each having a different common memory size." (Fig. 3A, Col. 2, line 63-67) and "means for storing data from the multiple bit streams in a block in one of the multiple block pools when the data has a storage requirement equal to or less than the common memory size for the block pool." (Col. 3, line 2-5)].

Hamasaki and Liu are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to enhance the digital data decompressing system of Hamasaki to arrange memory space into multiple block pools of different common memory size and to store data in one of the multiple block pools as disclosed by Liu in order to make the system more efficient and hence avoid excessive memory allotment or extra cost (see Liu Col. 1, line 44-45).

Furthermore, Simon discloses a method that "measures the time it takes to decompress each sub-frame of the compressed digital video signal S10" by "applying the signal S10 to a decoder such as processor 30 of the playback system 8 and measuring the processor decode time" (Col 10, line 20-24).

Simon and Hamasaki are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to enhance the digital data decompressing system of Hamasaki in view of Liu by measuring the length of decoding time for the frame header and if desired to select transient storage area depending on the duration of decoding time for the frame header or pre-decoding processing as taught by Simon in order to monitor the amount of buffer storage needed by the playback system as mentioned by Simon (Col. 10, line 44-45).

Regarding claim **17**, for examining purposes, claim **17** will be considered to be dependent on claim **15**, "said storage means" will be considered as "said processing of storage", and "said data capacity changing means" will be considered as "said data capacity change processing".

Hamasaki and Liu disclose "said storage means includes a plurality of sets of transient storage areas, each set being made up of a plurality of transient storage areas and being different in storage capacities; said data capacity changing means selecting one of transient storage areas of said plural sets" [see rejection to claim **15** above] and Simon discloses "depending on the duration of the processing time retained to be needed for said pre-decoding processing." [With respect to this limitation, Simon discloses a method that "measures the time it takes to decompress each sub-frame of the compressed digital video signal S10" by "applying the signal S10 to a decoder such as processor 30 of the playback system 8 and measuring the processor decode time"

(Col 10, line 20-24). Simon's method allows measurement of the length of decoding time for the frame header or pre-decoding processing and if desired to use Liu's method to change transient storage area from plural sets depending on the duration of decoding time for the frame header.].

15. Claims **8 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamasaki in view of Liu and further in view of Simon and further in view of Jiyunsaku.

Regarding claim **8**, Hamasaki in view of Liu and further in view of Simon discloses "The information processing apparatus according to claim 7 wherein, if said pre-decoding processing relevant to unit data is the processing of demodulation of relevant data, related to said unit data," [see rejection to claim **1** above] and "the duration of the processing time needed for said pre-decoding processing is estimated based on the ancillary information added as relevant data." as [See Simon, Col. 10, line 52-63, Simon discloses a method for estimating the decode time "based on the known decoding time characteristics of the video processor 30" such as "a fixed number of well define operations (say 'A', 'B', etc.) each of which requires a maximum length of time to complete" during the decoding process and the information about the input bit stream from the encoder which "can determine precisely how many times each of these operations will be performed for each sub-frame". Simon's method allows estimation of the duration of decoding time for frame header or pre-decoding processing based on ancillary information added as relevant data.].

Hamasaki and Liu and Simon do not specifically disclose if said pre-decoding processing relevant to unit data is the processing of decryption of relevant data, related to said unit data,".

However, Jiyunsaku discloses recording and reproducing sound data in which data compression of the voice data DA is carried out by MP3 specification, it is changed into MP3 file Fmp3, and these MP3 file Fmp3 are supplied to the enciphering circuit 114 to be encrypted before recording on a CD-R disk (Par. 0026 and 0027). By teaching a method of encrypting compressed audio data, Jiyunsaku also teaches method of decrypting encrypted compressed audio data during decoding and pre-decoding processes since the encrypted compressed audio data must be decrypted at time of reproduction.

Jiyunsaku, Hamasaki, Liu, and Simon are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to enhance the teaching of Hamasaki to include decryption during decoding and pre-decoding processes as disclosed by Jiyunsaku in order to raise the security of recorded voice data (as taught by Jiyunsaku).

Regarding claim **16**, Hamasaki in view of Liu and further in view of Simon discloses "The information processing method according to claim 10 wherein if said pre-decoding processing relevant to said unit data is the processing of demodulation for relevant data related to unit data" [see rejection to claim **10** above] and "the duration of the processing time, retained to be needed for said pre-decoding processing, is

estimated based on the ancillary information annexed to said relevant data." as [See Simon, Col. 10, line 52-63, Simon discloses a method for estimating the decode time "based on the known decoding time characteristics of the video processor 30" such as "a fixed number of well define operations (say 'A', 'B', etc.) each of which requires a maximum length of time to complete" during the decoding process and the information about the input bit stream from the encoder which "can determine precisely how many times each of these operations will be performed for each sub-frame". Simon's method allows estimation of the duration of decoding time for frame header or pre-decoding processing based on ancillary information annexed as relevant data.].

Hamasaki and Liu and Simon do not specifically disclose if said pre-decoding processing relevant to said unit data is the processing of decryption for relevant data related to unit data."

However, Jiyunsaku discloses recording and reproducing sound data in which data compression of the voice data DA is carried out by MP3 specification, it is changed into MP3 file Fmp3, and these MP3 file Fmp3 are supplied to the enciphering circuit 114 to be encrypted before recording on a CD-R disk (Par. 0026 and 0027). By teaching a method of encrypting compressed audio data, Jiyunsaku also teaches method of decrypting encrypted compressed audio data during decoding and pre-decoding processes since the encrypted compressed audio data must be decrypted at time of reproduction.

Jiyunsaku, Hamasaki, Liu, and Simon are analogous art because they are in the same field of endeavor of digital data processing.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to enhance the teaching of Hamasaki to include decryption during decoding and pre-decoding processes as disclosed by Jiyunsaku in order to raise the security of recorded voice data (as taught by Jiyunsaku).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following reference teaches method for reproducing audio or video or picture data:

US 2001/0008574

JP 2000-165844

US 6,636,563

US 2001/0048721

US 2001/0029456

US 7,103,100

The following reference teaches method for dynamic memory allocation for data storage:

US 6,088,777

US 5,289,470

The following reference teaches method for verifying the integrity of a file stored separately from a computer:

US 5,050,212

The following reference teaches method for authenticating a media and/or the data stored on the media:

US 6,636,689

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRONG NGUYEN whose telephone number is (571)270-7312. The examiner can normally be reached on Monday through Thursday 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Pham can be reached on (571)272-3689. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/THOMAS K PHAM/
Supervisory Patent Examiner, Art Unit 4148

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